

El Niño Preparation and Response

Nov. 10, 2011



Presentation Overview

- Winter Weather Outlook 2015-16
- Preparation and Mitigation
- Response and Recovery

Winter Weather Outlook 2015-16

- Alex Tardy, NOAA / National Weather Service

Preparation and Mitigation



- Risk assessment
- Areas of assessment
 - Activities

Risk Assessment

- Performed by a cross-functional staff team
- Identify and prioritize potentially vulnerable areas
- Identify associated risks, mitigation strategies and opportunities for coordination
- Implement mitigation strategies where feasible

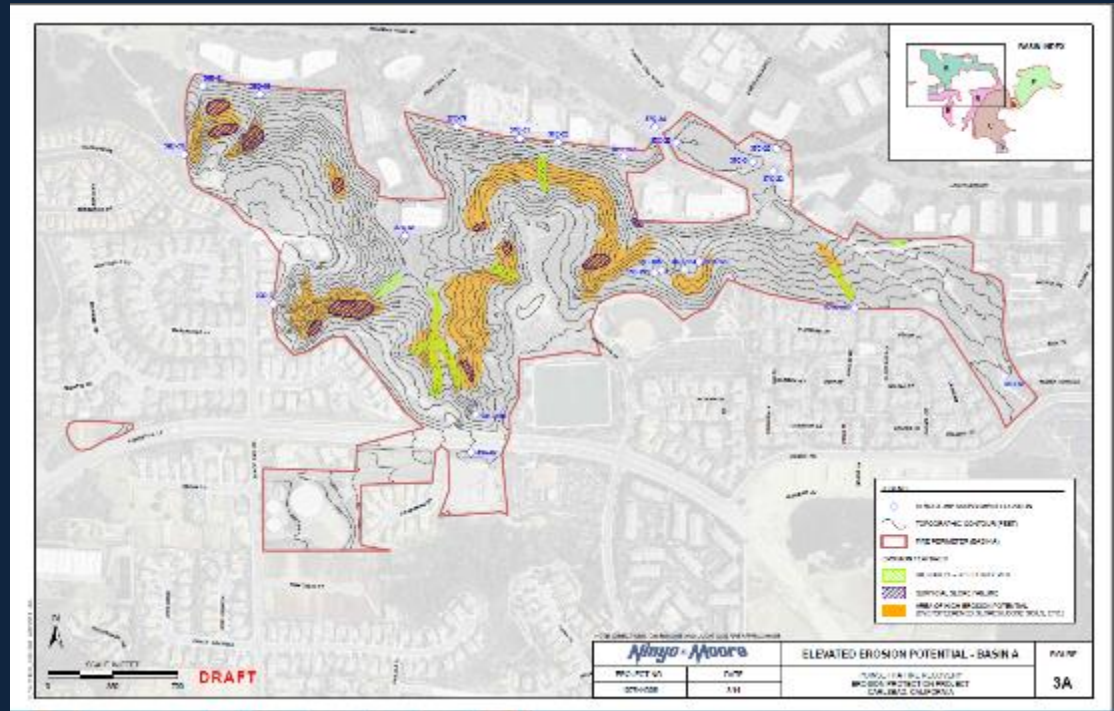
Risk Assessment Methodology

- Federal Emergency Management Agency (FEMA) 100-year flood maps
- 2014 Poinsettia Fire burn area
- Historical data from prior storm events
- Construction plans for both Capital Improvement Projects and private development
- Lessons learned from other agencies

Potential Risks

- Flooding
- Water intrusion
- Swift water
- Road impacts (tree limbs, erosion)
- Traffic impacts
- Wind and rain
- Extended power outages

Assessment Area – Poinsettia Fire Burn Area



Assessment Area – Northwest Quadrant

- Drainage projects
- Flooding
- Parks
 - Hosp Grove
 - Maxton Brown
 - Laguna Riviera
- Buena Vista Lagoon



Assessment Area – Carlsbad Blvd.

- Flooding
- Traffic impacts
- Bluff erosion



Carlsbad Blvd. (2010)

Assessment Area – El Camino Real

- Traffic impacts
 - Tamarack to Chestnut
 - Robertson Ranch
 - Cannon Road bridge
- Rancho Carlsbad HOA
- Sunny Creek area



Assessment Area – La Costa

- Drainage projects
- Traffic impacts
- Erosion



Preparation and Mitigation Activities

- Capital Projects
- Preventive maintenance and inspections
- Corrective measures from prior storms
- Staff training
- Coordination with County Office of Emergency Services
- Access to California Conservation Corps, Urban Corps and CalFire resources

Preparation and Mitigation Activities

- CIP Drainage Projects
 - 16 projects scheduled in 2015-16, approx. \$5.2 MM
 - Northwest Quadrant Storm Drain Improvement Program
 - Drainage Master Plan (2008)
- Storm Drain Maintenance Program
 - All outfalls cleaned and inspected by end of 2015

Preparation and Mitigation Activities

- Construction activities: Private and CIP
 - Schedule adjustments
 - Project adjustments
 - Rain event action plans
 - Updated weekly during rainy season
 - Inspections

Preparation and Mitigation Activities

- Water operations
 - Maerkle Reservoir
 - Lake Calavera Dam
- Sewer operations
 - Lift stations
 - Spill prevention

Preparation and Mitigation Activities

- Procurement
 - Sand bags available for public
 - Erosion control
 - Moveable signage
- On-call contracts
 - Heavy equipment
 - Erosion control
 - Hazardous materials
 - Supplemental personnel (road clearing, tree limb removal)

Response

- Goals
- Impacts
- Emergency Operations



Response Activities – Severe Weather

- Unique impacts
- Longer duration
- Varying intensity
- Citywide engagement in response activities
(not limited to Public Safety)
- Regional impact

Response Activity Goals

- Protecting life, property and the environment
- Keeping public right-of-ways clear
- Traffic signals management
- Continuity of Operations
- Inter-agency coordination
- Property, infrastructure and storm water inspections

Severe Weather Impacts

- Life
 - Injuries, casualties
 - Extended power outage and medically fragile power-dependent
 - Health and sanitation
- Property
 - Conservation
 - Damage assessment
- Environment
 - Sewage spill
 - Hazardous material spill
 - Run-off/debris into lagoons (storm drain failure)

Potential Damage

- Embankment failure
- Drainage channel plugged
- Irrigation line damage
- Bridge abutment undermined
- Sewage spills
- Water flooding roadways
- Drainage pipe washed out
- Sidewalk undermined
- Roadway sinking, hazards
- Facility water intrusion
- Extended power outage
- Traffic Management Center signal operations system failure
- Fallen trees
- Clogged storm drains
- Fallen light poles
- Downed limbs and palm fronds
- Roof failure
- Traffic collisions
- Solar panels damage
- Coastal erosion

EOC Incident Objectives – Severe Weather

- Details, consequences and impacts of the severe weather incident
- Continue to provide for public safety and welfare of the community
- Access and functional needs support and assistance
- Provide for safety of all EOC staff and first responders
- Manage traffic flow
- Continuity of city services, functions and departmental operations
- Development of Local Proclamation of Emergency
- Fuel capacity and generator status and requirements
- Damage assessment
- Initial Recovery Operations

Recovery - Categories of Work



- Debris Removal
- Emergency Protective Measures
- Roads and Bridges
- Water/Sewage Control Facilities
- Buildings and Equipment
- Utilities
- Parks, Recreational, and Other

Encouraging Preparedness



City of
Carlsbad

Outreach

- Currents newsletter
- News release and media coverage
- E-newsletter to 8,000+ subscribers
- Article in Nov/Dec Carlsbad magazine
- Social media posts with tips
- City website El Niño pages
- Community presentations
- Targeted communications for special populations as needed

